STONHARD

PRODUCT DATA

STONCHEM®691

PRODUCT DESCRIPTION
Stonchem 691 is a highly cross-linked novolac epoxy, static control coating applied at a nominal thickness of 125 to 150 microns. The Stonchem 691 system has excellent resistance to concentrated sulfuric acid, solvents and caustics.

USES, APPLICATIONS
- Secondary containment areas
- Concrete pads and pedestals
- Splash/spill areas

PRODUCT ADVANTAGES
- Excellent chemical resistance to concentrated sulfuric acid, solvents and caustics
- Available in eight standard colors
- Custom colors are available upon request
- Factory proportioned units for easy application
- Static charge generation control even in low humidity environments

CHEMICAL RESISTANCE
Stonchem 691 is formulated to resist a variety of chemicals. Refer to the Stonchem 600 Series Chemical Resistance Guide which lists reagent concentration and temperature recommendations for each product.

PRODUCT LIMITATIONS
Stonchem 691 is designed for areas with foot traffic and light cart traffic only. If impact damage or high traffic is a concern, then the recommended systems are within the Stonchem 620 Series. Since Stonchem 691 utilizes a black conductive primer, any chipping or wear of the topcoat will stand out.

Stonchem 691 is a static generation and discharge control coating. It is designed to eliminate the build up of static charge even in low humidity environments. Stonchem 691 is not designed as a true ESD system where the range of resistance values are consistant and repeatable. Stonchem 691 will have conductivity readings and will control static build up, but it is not possible to guarantee that all conductivity readings will fall within a certain resistance range. If a true ESD system is required, Stonhard has other options. Contact your local Stonhard representative or Stonhard Technical Service Department.

PACKAGING
Stonchem 691 is packaged in units for easy handling. Each unit consists of:

Conductive Novolac Primer
1 carton containing:
- 2 containers of Part A (curing agent)
- 2 containers of Part B (conductive epoxy resin)

Topcoat
1 carton of Stonchem 691 containing:
- 2 quart cans of amine
- (2) 1 gallon cans of resin

1 carton of Stonchem 691/Stonkote AT5 C containing:
- 4 quart cans of Part C (conductive fibers)
- 4 pint cans of Part C-1 (anti-static wax)

Note: Each mix of Stonchem 691 Parts A and B requires two Part C and C-1.

PHYSICAL CHARACTERISTICS

Abrasion Resistance (ASTM D-4060, CS-17)	0.07 gm max. weight loss
Pot Life (@ 25˚C)	20 minutes
Suggested Number of Coats	One
Coverage (@ 5.0 mil, DFT)	51.2 m2 per unit
Cure Rate (@ 25˚C)	8 hours for light traffic 24 hours for normal operations
Temperature Limitations continuous exposure	60˚C 93˚C intermittent exposure
Fire Resistance of Dry Film	Self-Extinguishing
Cure Rate (@21˚C)	4 to 6 hours tack-free 24 hours chemical service
VOC (ASTM D-2369, Method E)	Conductive Novalac Primer 124 g/l Stonchem 691 80 g/l

Note: The above physical properties were measured in accordance with the referenced standards. Samples of the actual system, including binder and filler, were used as test specimens.

COVERAGE
Each unit of Stonchem 691 will cover approximately 51.2 m^2 at a thickness of 125 to150 microns. IF the Stonchem 691 is applied thicker than 6 mills it could negatively affect the conductivity readings.

Note: Coverage rates shown are theoretical. Actual coverage rates may vary. Make necessary allowances for the condition of the surface to be coated, working conditions, waste, spillage, experience level and skill of the installers, etc.

STORAGE CONDITIONS
Store all components between 16 to 29˚C in a dry area. Keep out of direct sunlight. Avoid excessive heat and do not freeze. The shelf life is 3 years in the original, unopened container.

SUBSTRATE
The Stonchem 691 system consists of a conductive primer layer and the topcoat layer. It is not designed to be installed directly over a concrete substrate and it is recommended that it be installed over a troweled mortar base. If a substrate other than a troweled mortar base, or existing polymer system is being considered, contact Stonhard's Technical Service Department for recommendations.

SUBSTRATE PREPARATION
Proper preparation is critical to ensure an adequate bond and system performance. The substrate must be dry and properly prepared utilizing mechanical methods. Questions regarding substrate preparation should be directed to your local Stonhard representative or Technical Service.

APPLICATION GUIDELINES

Before mixing and applying any material, make sure environmental conditions are satisfactory for application. For optimal working conditions, the substrate temperature must be between 15 to 27˚C. Measure the surface temperature with a surface thermometer. Cold areas must be heated until the slab temperature is above 15˚C. This will allow the material to achieve a proper cure. Also, a cold substrate will make the material stiff and difficult to apply. Warm areas or areas in direct sunlight must be shaded or arrangements made to work during the evenings or at night. A warm substrate (15 to 27˚C) will aid in the material's workability; however, a hot substrate (27 to 37˚C) or a substrate directly in the sun will shorten the material's working time and can cause other phenomenon such as pinholing and bubbling.

PRIMING

For applications over concrete, HT Primer is required prior to the application of Conductive Novolac Primer to eliminate soak-in and ensure the primer will test in the acceptable range. For applications over Stonclad GS or Stonclad HT, the HT Primer step can be omitted. Apply the Conductive Novolac Primer directly over the Stonclad GS or Stonclad HT. See Conductive Novolac Primer Product Data Sheet for complete application instructions.

MIXING

Stonchem 691 is supplied in factory proportioned quantities. To achieve thorough and proper mixing, the Stonchem 691 must be mechanically mixed using a heavy-duty, slow-speed drill (400 to 600 rpm) with a Jiffy Mixer. Empty the Stonchem 691 resin into a 5 gallon bucket. Add 2 of each Parts C and C-1 to each can of resin and mix for one minute. Add the amine and thoroughly mix for an additional minute. Avoid high-speed mixing that will entrain air into the mix.

APPLYING

Stonchem 691 can be applied at ambient temperatures of 16 to 29˚C and humidity below 80%. Stonchem 691 must be applied immediately after mixing the four components. Stonchem 691 is applied with a rubber squeegee and medium nap roller. The roller is used to remove squeegee lines and smooth out the surface. Stonchem 691 may be applied at a variable thickness ranging from 125 to 150 microns dry film thickness. Applying Stonchem 691 thicker than 150 microns may result in poor conductivity readings. Any questions regarding the application of Stonchem 691 should be directed to Stonhard's Technical Service Department.

ELECTRICAL TESTING

- While Stonchem 691 is a static control coating, it is important to note that it is not an ESD system. Therefore, you will get conductivity readings, but it is not possible to guarantee that all readings will fall within a certain resistance range.
- Once the Conductive Novolac Primer layer is tack-free, it must be tested for proper conductivity. Point-to-point and point-to-ground readings should be taken.
- The floor must also be tested after the application of Stonchem 691. Once the Stonchem 691 is tack-free, point-topoint and point-to-ground readings should be taken.

CURING

The surface of Stonchem 691 will be tack-free in 4 to 6 hours at 21°C. The coated area may be put back into service in 24 hours at 21°C. Ultimate physical characteristics will be achieved in 7 days.

RECOMMENDATIONS

- Apply only on clean, sound, dry and properly prepared substrates.
- Minimum ambient and surface temperature is 15˚C at the time of application.
- Maximum surface temperature should not exceed 27˚C during application. Substrate temperatures above 38˚C will drastically affect the working time of the product.
- Substrate temperature should be greater than 3˚C above dew point.
- Material should not be applied if humidity is above 85%.
- Application and curing times are dependent upon ambient and surface conditions. Consult Stonhard's Technical Service Department if conditions are not within recommended guidelines.

PRECAUTIONS

- Toluene or Xylene solvents are recommended for clean up of Stonchem 691 material spills. Use these materials only in strict accordance with the manufacturer's recommended safety procedures. Dispose of waste materials in accordance with government regulations.
- Avoid contact with Stonchem 691 amine and resin, as they may cause skin, respiratory and eye irritation.
- The use of NIOSH/MSHA approved respirators using an organic vapor/acid gas cartridge is recommended.
- The selection of proper protective clothing and equipment will significantly reduce the risk of injury. Body covering apparel, safety goggles and impermeable nitrile gloves are highly recommended.
- In the event of accidental eye contact, rinse eyes immediately with water.
- If material is ingested, immediately contact a physician and reference the SDS.
- Use only with adequate ventilation. Inhalation of vapors may cause severe headaches, nausea and possibly unconsciousness.

NOTES

- Safety Data Sheets for Stonchem 691 are available on line at www.stoncorr-europe.com under Tech Info or upon request.
- Specific information regarding chemical resistance of Stonchem 691 is available in the Stonchem 600 Series Chemical Resistance Guide.
- A staff of technical service engineers is available to assist with product application, or to answer questions related to Stonhard products.
- Requests for technical literature or service can be made through local sales representatives and offices, or corporate offices located worldwide.

Rev. 1/18

STONHARD
www.stoncor-europe.com

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FLOORS FOR EVERY ENVIRONMENT

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